AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A Rankine cycle system-equipped vehicle comprising:

an internal combustion engine for generating a driving force for traveling; and

a Rankine cycle system for generating a driving force, the Rankine cycle system being adapted to be operated by exhaust gas of the internal combustion engine when the internal combustion engine is running, and having an output shaft;

a power generator adapted to be driven by the Rankine cycle system,

wherein the Rankine cycle system output shaft is adapted to drive the power generator, and

wherein the Rankine cycle system is operated when the temperature of the exhaust gas of the internal combustion engine is at a predetermined value or higher and the flow rate of the exhaust gas of the internal combustion engine is at a predetermined value or higher.

2. (Original) The Rankine cycle system-equipped vehicle according to claim 1, wherein the Rankine cycle system is operated when the vehicle is accelerating and when the vehicle is cruising.

3. (Original) The Rankine cycle system-equipped vehicle according to claim 1, wherein the vehicle further includes a motor/generator for generating both a driving force for traveling and a regenerative braking force.

4-5. (Canceled)

6 (Original) The Rankine cycle system-equipped vehicle according to claim 1, wherein the Rankine cycle system is operated when the vehicle is decelerating.

7. (Original) The Rankine cycle system-equipped vehicle according to claim 6, wherein the vehicle is determined to be decelerating if the speed of the vehicle is substantially constant on a downhill route.

8. (Currently Amended) The Rankine cycle system-equipped vehicle according to claim 2, wherein the vehicle is determined to be accelerating if the speed of the vehicle is substantially constant on [[a]] an uphill route.

9. (Original) The Rankine cycle system-equipped vehicle according to claim 2, wherein the vehicle is determined to be in the cruising state if the absolute value of the vehicle acceleration or the vehicle speed is equal to or less than a predetermined value.

10. (Original) The Rankine cycle system-equipped vehicle according to claim 1, wherein the vehicle further comprises a battery and means to prevent overcharging of the battery.

11. (Original) The Rankine cycle system-equipped vehicle according to claim 1, wherein the vehicle further comprises a transmission and the Rankine cycle system is used

to drive the transmission.

12. (Original) A Rankine cycle system comprising:

an evaporator for generating a gas-phase working medium by heating a liquid-phase working medium using exhaust gas of an internal combustion engine; and

a displacement type expander for converting the thermal energy of the gas-phase working medium generated by the evaporator into mechanical energy,

wherein the Rankine cycle system comprises:

temperature setting means for setting the temperature of the gas-phase working medium at the outlet of the evaporator based on the temperature and the flow rate of the exhaust gas at the inlet of the evaporator;

temperature control means for controlling the temperature of the gas-phase working medium at the outlet of the evaporator wherein the temperature is at the set temperature set by the temperature setting means;

pressure setting means for setting the pressure of the gas-phase working medium at the inlet of the expander based on the set temperature; and

pressure control means for controlling the pressure of the gas-phase working medium at the inlet of the expander so that the pressure is at the set pressure set by the pressure setting means.

13. (Original) The Rankine cycle system according to claim 12, wherein the temperature control means controls the temperature of the gas-phase working medium by the amount of liquid-phase working medium supplied to the evaporator, and the pressure

control means controls the pressure of the gas-phase working medium by the rotational speed of the expander.

14. (Original) The Rankine cycle system according to claim 12, wherein the temperature control means provides feedback control to make the actual gas-phase working medium temperature coincide with the set gas-phase working medium temperature.

15. (Original) The Rankine system according to claim 12, wherein the pressure control means provides feedback control to make the actual gas phase working medium temperature coincide with a set gas-phase working medium pressure.